Amendments to Claims:

This listing of claims replaces prior listing of claims.

Listing of Claims:

1. (*Currently amended*) A ranking-based dark compensation circuit comprising:

a set of comparators, wherein each comparator is coupled to an associated temporary result register, each comparator comprising a first input and a second input, the first coupled to receive an incoming sample and the second input coupled to an output of the associated temporary register to receive a value stored in the associated temporary register, and each comparator compares the incoming sample with the stored temporary register value; and

if the value of the sample is greater than the value of the temporary register, then provides that sample to a next comparator or, if there is no next comparator, to a discard area; and

if the value of the sample is less than the value of the temporary register, then stores that sample in the temporary register and provides the original value of the temporary register to a next comparator or, if there is no next comparator, to a discard area; and an output value stored in the *k*th temporary result register.

2. (*Original*) The circuit of claim 1 additionally comprising a global reset line.

3. (*Original*) The circuit of claim 1 wherein the number of samples and the number of comparators are variable.

4. (*Currently amended*) A ranking-based automatic dark compensation method for a dark compensation circuit comprising a set of k numbered comparators, comprising the steps of:

initializing a set of temporary result registers with a maximum dark value;

providing a sequence of samples to the set of k comparators, wherein each comparator is coupled to an associated temporary result register, and each comparator executes the following steps:

comparing the sample to the value of the associated temporary result register, wherein

if the value of the sample is greater than the value in the temporary register, then providing that sample to a next comparator;

if the value of the sample is less than the value in the temporary register, then storing that sample value in the ~~first~~ temporary register and providing the original value of the temporary register to a next comparator;

discarding the values that output the kth comparator; and

providing a dark compensation value output in the kth temporary register as an output of the dark compensation circuit.

5. (*Original*) The method of claim 4 comprising the additional step of resetting the entire circuit by means of a global reset line.

6. (*Original*) The method of claim 4 wherein the number of samples and the number of comparators are variable.